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Finance, Discipline and the Labour Share in the Long-Run: France (1911–2010) and Sweden (1891–2000)

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Abstract

There is an ongoing debate within political economy on how finance affects capital–labour relations. Industrial relation scholars have demonstrated that financialization empowers capital and induces the liberalization of industrial relations. Additionally, meso and macro level studies show that finance reduced the labour share during neoliberalism. However, the literature is relatively limited and does not extend to the pre-WWII period. Considering finance as historically integral to capitalism, this paper estimates the impact of finance on the labour shares of France (1911–2010) and Sweden (1891–2000). The results show that mortgage debt decreases the labour shares of both countries, thus, the financialization of households induces industrial discipline historically. However, the negative effect is substantially smaller in Sweden where housing finance is state-led and bargaining coordination is centralized over the last century.

1. Introduction

In recent years, the study of the neoliberal finance-dominated regime is gaining prominence among social scientists (van der Zwan 2014) who explore how the rise of finance has been affecting capital–labour relations and macroeconomic performance since the early 1980s (Froud *et al*. 2000; Gospel and Pendleton 2003; Krippner 2005; Stockhammer 2004). Despite quantitative macroeconomic history studies provide evidence that finance has been integral to capitalism since the mid-nineteenth century (Blackwell and Kohl, 2018, 2019; Jordà *et al*. 2017), much of the literature analyses the rise of finance as a particular aspect of neoliberalism, focusing myopically on the post-1980s experience and mainly on the Anglo-Saxon economies (Christophers 2015; van der Zwan 2014). Inspired by the growing historical

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literature, this paper goes beyond the neoliberalism-biased interpretation of finance and looks at how different varieties of financial systems affected functional income distribution since the late nineteenth century.

A strand of the empirical finance literature has focused on whether it has contributed to worsening employment relations and the reduction in the labour shares, which is a stylized fact of the last four decades (IMF 2017; Karabarbounis and Neiman 2014). Köhler *et al*. (2019) outline four channels through which the rise of finance since the early 1980s affected the bargaining power of labour and its income share: (a) rising household indebtedness (Argitis and Dafermos 2013; Froud *et al*. 2002; Langley 2007; Wood 2017); (b) enhanced exit options for firms due to financial liberalization; (c) the rise of shareholder value orientation (Froud *et al*. 2000; Lazonick and O'Sullivan 2000); and (d) increasing financial overhead costs (Argitis and Dafermos 2013; Hein 2007). Industrial relation scholars, such as Gospel and Pendleton (2003), Palpacuer *et al*. (2011) and Appelbaum *et al*. (2013),, Thompson (2003) have demonstrated that finance has transformed the objectives of corporate governance and induced the liberalization of employment relations. Ultimately, at the meso and macro level, this resulted in finance contributing to the steep fall in labour shares since the 1970s (Alvarez 2015; Dünhaupt 2017; Guschanski and Onaran 2018; Köhler *et al*. 2019; Lin and Tomaskovic-Devey 2013; Stockhammer 2017; Wood 2017). However, the impact of finance on labour relations and functional income inequality has not yet been examined in the historical context.

The present paper fills this gap in the literature by estimating the determinants of the labour share for France (1911–2010) and Sweden (1891–2000). My strategy is mainly exploratory and based on a macro-level, case-based comparative analysis. The objective is to explore: first, whether finance has been influencing the evolution of the labour share since the late nineteenth century; second, whether the effects of finance on the wage share are weaker in countries with state-led housing finance systems (Johansson 1938; Wood 2017) and centralized bargaining coordination (Argitis and Dafermos 2013), like Sweden. A comparison of the effects of finance on inequality between two countries with substantially different housing finance systems and union structures can provide important insights on whether industrial organization and politics matter for the disciplinary impact of finance. France is selected as a continental European economy with a liberalized labour market and private-based finance, but with strong *Dirigiste* tradition (Clift 2006; Dutton 2002).[1] Sweden is chosen as a Nordic economy with a historically coordinated labour market (Blake 1960) and a longstanding statist-developmentalist housing finance tradition (Johansson 1938; Schwarz and Seabrooke 2008).

The main finding of this paper is that mortgage debt increases have been causing decreases in the labour shares of France and Sweden during the last century. However, politics and bargaining institutions do matter as the negative effect is substantially smaller in Sweden, where historically, wage bargaining is centralized and the regulation of housing finance in favour of indebted households is well established. Real share prices and stock market

capitalization decrease the Swedish labour share as well in the historical context. There is also evidence for positive effects of government spending in France and for positive effects of unionization in Sweden in the historical perspective.

The rest of this paper is organized as follows. Section 2 examines the political economy of income distribution with a focus on how finance affects capital–labour relations and inequality. Section 3 presents key historical stylized facts for the two countries and the empirical strategy. Section 4 reports the econometric results. Section 5 discusses the significance of the main findings. Lastly, Section 6 concludes.

2. The political economy of income distribution

The issue of the determination of income distribution has been historically one of the main debates in political economy since the times of Smith, Ricardo and Marx. Due to the diversity of scholars who study such issues and the complexity of the process itself, there is no unifying theoretical framework for the analysis of income distribution. Different theoretical traditions centre on different complementary channels, such as shifts in welfare spending and collective bargaining, globalization and capital mobility, and the rising influence of financial markets. This section briefly outlines these different channels and discusses potential complementarities among them, with a focus on the disciplinary impact of financialization.

Power Resources

According to the classical political economists, the principal problem of political economy, that is income inequality, is primarily driven by labour power resources: when workers become unionized and support actively pro-labour political parties, they maximize their collective bargaining power (Kollmeyer 2017; Korpi 1983; Stephens 1979). Collective bargaining allows for higher minimum wages, collective wage agreements that include low-income workers and increases in unemployment and public welfare benefits. All these aspects decrease the cost of job loss (the difference between the average salary and the average income of the unemployed), which minimizes the disciplinary effect of high unemployment/underemployment on wages. Several social scientists have presented relevant micro, meso and macro level evidence in favour of the power resources framework.

Cowling and Molho (1982) provide sectoral-level evidence that unionization and strike activity increased the wage share of the United Kingdom in 1968 and 1973, while Leslie and Pu (1996) show that the decline in these labour power proxies raised earnings inequality in Britain over the period 1970–1993. Using survey pay dispersion data for Italy, Belgium and Spain for the year 1995, Dell'Aringa and Pagani (2007) find that collective bargaining institutions reduced earnings inequality. Pontusson (2013) demonstrates that earnings inequality is lower in the more unionized

OECD economies over the period 1975–1995. Similarly, Devincieti *et al*. (2019) demonstrate that wage dispersion among male workers in Italy from the mid-1980s to the early 2000s was determined by the degree of centralization of industrial relations.

Focusing on the macro level, Fichtenbaum (2009) reports that union density increased the wage share of non-supervisory workers in the United States over the period 1949–2006. Kristal (2010) and Bengtsson (2014a) also find robust positive effects of union density on the labour share using panel data analysis for groups of advanced over the period 1960–late 2000s. Bengtsson (2014b) also finds similar positive (but statistically insignificant) effects of union density on the wage share of Sweden between 1900 and 2000. Hancke (2012) shows that the interaction between conservative central bankers and bargaining coordination has decreased the labour share, using a panel dataset of advanced capitalist economies that covers the post-1970 period.

Trade Globalization and Capital Mobility

Enhanced capital mobility and trade openness has also been identified as a potential determinant of the bargaining power of labour. Stolper and Samuelson (1941) argued that trade openness will eventually diminish global income inequalities. Assuming that all economies are in a stable full-employment state, and the mobilities of capital and labour are equal to zero, the Stolper–Samuelson theorem predicts that the abundant factor will benefit in each case, that is capital in advanced and labour in emerging markets. Contrarily, political economists like Rodrik (1997) have argued that capital mobility benefits the most mobile, rather than the abundant, factor of production. Capital mobility translates to increased exit options for firms, that is capital owners can choose from a wide variety of options. This allows employers to impose industrial peace, liberalize labour relations and suppress wages under the threat of relocating production abroad. In this way, workers in both advanced and emerging markets compete with each other to attract investment, thus, more likely to accept lower wages triggering a relatively uniform decrease in the labour share.

Grant and Wallace (1994) and Brady and Wallace (2000) explore this argument for the manufacturing sector of 48 US states from the 1970s to the late 1990s. They report econometric evidence that industrial capitalists' decision to relocate production is triggered by increased unionization and labour militancy, while foreign direct investment (FDI) has weakened the organizational capacity of labour and decreased its income share. Boulhol *et al*. (2011) scrutinize firm-level data for the United Kingdom manufacturing sectors between 1988 and 2003 and report that import penetration decreased the bargaining power of labour and the mark-ups of smaller firms.

Harrison (2002), Jayadev (2007) and Stockhammer (2017) examine the distributional effects of globalization at the macro level, using panel datasets that include emerging and advanced economies centring on the post-1970 era. They provide econometric evidence that trade openness, capital account

openness and FDI have reduced the labour shares. Additional evidence is provided by the ILO (2008) and the IMF (2017), which show that the share of foreign assets and liabilities has decreased the wage shares during neoliberalism.

Finance, Working Class Discipline and Inequality

Recent studies within the fields of industrial relations, politics and economics contend that financial intermediation also plays a key role in bargaining outcomes and inequalities. The rise of finance during neoliberalism has taken several different forms, such as the shareholder value orientation of corporate management, the rise in dividend and interest payments, rising financial profits of non-financial firms and growing household indebtedness. This element of neoliberalism has been characterized as the financialization of the economy (Christophers 2015; Dore 2008). According to van der Zwan (2014), studies within this field include three main areas/approaches: financialization as an accumulation regime, financialization of corporate governance, and financialization of everyday life (low- and middle-income households).

Despite the clear majority of the literature has a narrow focus on finance in the neoliberal period (Christophers 2015, p. 191), authors like Hilferding (1910), Hobson (1902), Neal (1990) and Arrighi (1994) document earlier financial expansions, even since the fifteenth century. Neal (1990) documents the first financial revolution in Europe back in the sixteenth century induced by transferable, government-backed annuities in the Netherlands, France and the United Kingdom. Building on the early literature on imperialism and finance (Hilferding 1910), Arrighi (1994); Hobson 1902 contends that, historically, as the old accumulation regime struggles to retain high profitability, it shifts to the financial sector seeking higher profits. In this regard, he associates the financial expansion of the early twentieth century with the collapse of the old British regime, while the industrial expansion of the *Golden Age* is related to the *Pax Americana*, that is the post-WWII economic dominance of the United States at the international level (Arrighi 1994, p. xii). In this respect, the post-1980s shift towards finance can be interpreted as the aftermath of the fall of the US-dominated Fordist regime.

Quantitative macroeconomic historians have also shown that finance has been historically integral to capitalism. Jordá *et al*. (2017) show that mortgages induced financial crises in the post-WWII era, while corporate debt was more influential in the pre-WWII period. Blackwell and Kohl (2018, 2019) emphasize on the path-dependent evolution of national housing finance systems since the mid-nineteenth century and classify them into deposit based and bond based. The authors trace the origins of these credit-issuing systems back in the nineteenth century, demonstrating that financial intermediation has been an integral aspect of capitalism for more than a century, but with significant cross-country discrepancies.

Thus, the rise of finance should be analysed as a multidimensional evolutionary process, which can take different forms across space and time,

and not as the neoliberal financial structure. Accordingly, certain dimensions of finance may become dominant during a regime but that does not imply that other aspects cannot have complementary effects on investment decisions, capital accumulation, employment relations and income distribution.

Household Finance

A key channel through which finance influences income distribution and employment relations is the rise of household debt accumulation. The argument that inequality may increase due to rising household indebtedness first appeared within the Foucauldian cultural political economy literature (Froud *et al*. 2002; Langley 2007). According to this approach, housing finance has transformed investor identities, inducing working class's self-discipline and loss aversion behaviour due to its dependence on finance. Rising debt commitments make workers more insecure about defaulting on their debt, therefore, they avoid risking their employment by negotiating more aggressively for higher wages or participating in unions.

Darcillon (2015), Meyer (2019), and Kollmeyer and Peters (2019) report evidence that financial intermediation and the size of the financial sector decreased workers' bargaining power, employment protection and the development of unions during neoliberalism. Guschanski and Onaran (2018) show that household debt and globalization decrease the labour share, while welfare spending increases it, using sectoral-level data for eight advanced OECD countries (1970–2011).

Argitis and Dafermos (2013) argue that this process is path dependent, as in economies with wide bargaining coverage workers feel safer, thus they can act more aggressively against employers and demand higher wages to improve their financial position. In economies with weaker labour market institutions, the disciplinary effect of household indebtedness is stronger. Wood (2017) claims that the degree of state intervention in domestic financial systems is also important since, in statist-developmentalist economies, where the state protects indebted households, the disciplinary wage effect of household debt is moderate. He reports econometric evidence that the effect of mortgage debt on the wage share is negative and statistically significant effects in the liberal economies of the United States and the United Kingdom, but not in the statist developmentalist economy of Sweden in the post-1980 period. Köhler *et al*. (2019) report that the effect of household debt on the wage share is statistically significant only in countries with weak bargaining institutions and indebted low-income households.

As noted by Blackwell and Kohl (2018, 2019), the link between finance and housing is not a novel development, as different housing finance systems started developing at least since the mid-nineteenth century in several economies, including France and Sweden (Hoffman *et al*. 2015; Johansson 1938). However, the impact of housing finance on factor income shares has not been explored yet in the historical context.

Shareholder Value Orientation

Another aspect of finance that has altered the capital–labour power relations is the rise of shareholder value orientation in non-financial corporate governance. Lazonick and O'Sullivan (2000) claim that the rising influence of shareholders in non-financial firms has made managers aim for short-term profitability instead of long-term investments. Shareholders press managers to increase share prices to induce higher dividend payments, that is their income. Thus, managers increase the firm's debt ratios to buy back shares and retain high stock prices, which eventually worsens non-financial firms' financial position. Consequently, managers endeavour to improve their firms worsening financial position due to rising overhead financial payments by workforce downsizing and squeezing wages (Froud *et al*. 2000; Thompson 2003). At the macro level, the more shareholder-oriented an economy becomes as a whole, the more likely is that an increasing number of non-financial firms will engage with the stock market, hence, stock market capitalization will rise and contribute to a stock market boom (Kuvshinov and Zimmerman 2018).

Gospel and Pendleton (2003) scrutinize the effects of financial engagement on different varieties of corporate governance and how these transformations affected labour management. Palpacuer *et al*. (2011) focus on human resource management for skilled workers in France during the post-2000s period and report that the financialization of corporate governance induced the liberalization of employment relations. Appelbaum *et al*. (2013) examine the impact of private equity buyouts on labour relations based on four firm-level case studies, showing that the financialization of those firms led to the breach of employment contracts.

Regarding functional income distribution, Dünhaupt (2017) and Köhler *et al*. (2019) use panel data analysis and provide robust macro-level evidence that non-financial corporations' dividend and interest payments and share buybacks, and the stock turnover ratio, respectively, have decreased the labour share since the late 1980s. Although this process escalated during neoliberalism, the impact of finance on corporate governance was evident since the pre-WWII period for many economies, including France (Carney 2006) and Sweden (Jonnergård and Larsson-Olaison 2018).

Financial Profits and Overheads

Financial liberalization and the rise in financial profits of non-financial firms constitute another important dimension of financial expansion periods (Krippner 2005; Lapavitsas and Mendieta-Muñoz 2019; Tomaskovic-Devey and Lin 2011). Financial liberalization allows firms, on the one hand, to be able to obtain cheaper business credit to fund their real investments and, on the other hand, to expand their activity to financial investments.

Hein (2007) and Argitis and Dafermos (2013) argue that increases in corporate indebtedness can make firms to pursue limiting wage share growth, even if that is not used for share buybacks but for real investment. Since the increase in business debt comes with an increase in financial overheads for

non-financial firms, their managers are likely to attempt counterbalancing through an equal decrease in the share of wages.

Regarding financial profits, Lin and Tomaskovic-Devey (2013) argue that firms which shift towards the financial sector become less labour intensive, hence, they become less dependent on labour. This relative decrease in the importance of labour for profitability allows the rise of an economically stable growth model with a higher unemployment rate, that is a stronger 'reserve army' effect that reduces the wage share. Their industry-level estimations show that increases in financial income indeed reduced the labour share over the period 1970–2008. Alvarez (2015) also finds that interest payments and financial profits decrease the wage share in France between 2004 and 2013, using firm-level data for 6,980 French non-financial corporations.

3. Empirical design

Despite historical macroeconomic studies provide evidence that finance has been integral to capitalism at least since the mid-nineteenth century for several countries, none has scrutinized its impact on functional income distribution. Thus, it is of great interest to explore: (i) if finance has been historically a key driver of functional income distribution; and (ii) whether the potential negative effects of finance on wage share growth are weaker in countries with state-led housing finance systems and centralized wage bargaining institutions. For this purpose, the rest of this paper scrutinizes the impact of finance on the wages shares of France (1911–2010) and Sweden (1891–2000)[2] through a historicized comparative analysis.

Focusing on two case studies allows providing a more thorough analysis of the causal relationships and institutional discrepancies, using a comparativist approach. The two case studies have been two historically financialized economies, but with substantially different finance systems (Blackwell and Kohl 2018) and labour market institutions (Blake 1960). The key similarity is that both countries were financialized with extensive housing finance intermediation since the mid-nineteenth century, which allows exploring question (i), while the key differences are that their financial and wage bargaining institutions have been substantially different, which is fundamental for question (ii).

Finance and Distribution in the Long-Run

Historically, the French housing finance model has been a private, monopolistic, deposit-based system (Blackwell and Kohl 2018, p. 59), with capital markets playing a central role in the pre-WWI era and after 1980. Carney (2006) claims that prior to WWI, like the Anglo-Saxon economies, the French financial system was primarily based on its well-developed securities markets. As noted by Hoffman *et al.* (2015), in this early post-agricultural phase, notaries played a complementary role by steering capital towards the

TABLE 1
Financial Systems in the Historical Perspective

	France			*Sweden*		
	Pre-45	*Bretton Woods (1945–1971)*	*Neoliberalism (1971–2011)*	*Pre-45*	*Bretton Woods (1945–1971)*	*Neoliberalism (1971–2013)*
Business debt	21.88	65.01	69.32	35.89	16.24	31.54
Mortgage debt	4.03	12.77	29.82	26.69	29.57	50.83
Stock market capitalization	34.02	19.40	39.17	36.55	19.46	49.29

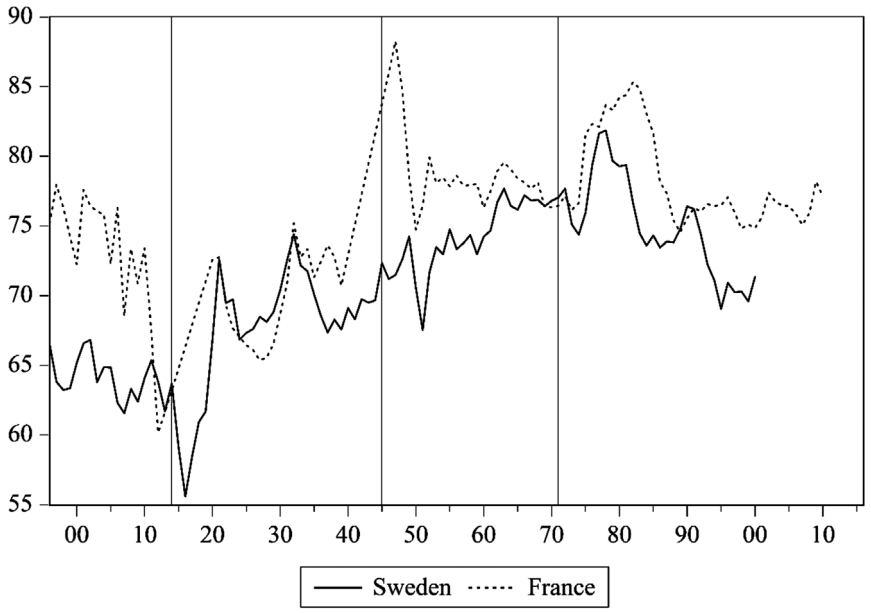
Note: Numbers in the table are averages (% GDP) for each sub-period.
Source: Jordà *et al*. (2016); Roine *et al*. (2009).

mortgage market, which eventually attracted bank capital as well. During the 1929–1945 period, securities markets declined globally and banks gained relatively more power within the financial system. Nevertheless, unlike the United States and the United Kingdom, France remained a bank-based market under the pressure of workers and farmers until 1983, where a process of financial liberalization reincarnated domestic capital markets. As reported in Table 1, stock market capitalization is, indeed, substantially higher before 1945 and after 1971, while the rise of the bank-based finance system is reflected in significant increases in both mortgage and corporate indebtedness after 1945.

In Sweden, during its early industrialization phase, between 1870 and the early 1930s, successful family-owned firms were established, which eventually were left to their successors. Since refinancing investment gradually became more difficult, banks started playing a key role as shareholders and managers of non-financial firms (Jonnergård and Larsson-Olaison 2018). However, in the early 1930s, the state imposed financial regulation, according to which banks could not own shares of non-financial firms anymore. Existing shares were transferred to close-end investments funds that led to industrial oligopolization (Hermansson 1962) and the rise of the Handelsbank and the Wallenberg investment groups. Social democrats supported this concentrated industrial structure under the 'Swedish model', which attempted to balance growth and industrial peace by strengthening collective bargaining. Regarding housing finance, Sweden's mortgage banking model has been a bottom-up, bond-based system with substantial state involvement (Blackwell and Kohl 2018). State intervention in housing finance in Sweden is based on the long-standing Scandinavian perception of house ownership as a social right, thus, it has been historically concerned with the provision of credit with favourable conditions for the indebted households (Johansson 1938).

Nonetheless, since the early 1980s, a wave of financial liberalization and declining public welfare led to a boom in the Stockholm stock exchange market. The extensive welfare state of the pre-1980 period gave its place to pension benefits invested in the stock market through pension funds. The impact of financial liberalization after 1980 seems to have an effect on the

FIGURE 1
Adjusted Labour Shares (% of GDP).



Note: Series adjusted for self-employment income.
Sources: Sweden — Edvinsson (2005); France — Piketty and Zucman (2014).

Swedish mortgage and corporate credit market since both debt aggregates rose substantially during neoliberalism. Yet, Sweden largely preserved its statist-developmentalist approach on housing even after 1980 (Schwartz and Seabrooke 2008; Wood 2017) As in France, the rise in the influence of capital markets is reflected in high stock market capitalization both in the pre-1945 and the post-1971 eras.

Figure 1 presents the evolution of the adjusted labour shares of the two countries over the full period. Both labour shares are adjusted for the income of self-employed, which allows accounting for long-term structural changes, such as a shift in employment from the agricultural to the industrial sectors.

As shown in Figure 1, in France, the declining trend of the labour share in the early twentieth century was accompanied by relatively high levels of private debt, mainly in the form of business debt. However, during the 'Golden Age', the relationship between business debt and the labour share in France is less strong, as the rapid rise of business debt seems to be relatively uncorrelated with the labour share. Stronger correlation appears only in the transition period between the Golden Age and neoliberalism (i.e. 1975–1985), where the fall in the business debt ratio concurs with a 10 per cent increase in the labour share. In contrast, the great expansion of mortgage credit provision during the post-WWII period — and especially after the beginning of financial

liberalization in 1983 — coincides with the stagnation of the French labour share from 1950 to 1975 and 1990 to date.

Regarding Sweden, the expansion of business and mortgage credit over the period 1875–1920 seems to be correlated with the decline in the labour share during the same era, reducing from over 65 per cent to almost 55 per cent. During the 1930–1970s 'Swedish model' period, the Swedish labour share increased significantly and reached its peak at slightly over 80 per cent of GDP in the late 1970s. In his state-regulated era, the share of private debt aggregates was relatively lower as compared to the pre-WWI financialization and the neoliberal eras. Eventually, in the neoliberal financial deregulation period, the steep increase in both private debt aggregates (and especially mortgage debt) is correlated with the fall in Sweden's wage share from over 80 per cent to 70 per cent in the early 2000s.

Overall, the descriptive statistics for the two countries suggest that the rise of finance is not a unique aspect of neoliberalism. Corporate finance has been more dominant in certain eras, while housing finance played a more central role in others. In both economies, the fluctuations in their wage shares appear to be more closely linked to the evolution of mortgage credit. However, further scrutiny is necessary to unveil the direction of causality and potential cross-country differences related to domestic institutional complementarities. Answers to these open questions can be offered by econometric analysis.

Econometric Methodology

As a further step in the analysis of the adjusted labour shares in France (1911–2010) and Sweden (1891–2000) presented in Figure 1, I estimate their determinants. The estimations are based on the unrestricted Error-Correction Model (UECM) (Davidson *et al*. 1978; Sargan 1964), including the short-run (first-differenced) and the long-run (level) effects of the independent variables. This model is used by Kristal (2010) and Bengtsson (2014a) but in a panel data context. As shown in the Appendix (Table A2), all variables are either I(0) or I(1). According to the ADF test, the residuals of the stationary regression between the wage share and the explanatory variables are stationary, hence, the variables are cointegrated. Consequently, the UECM is applicable.

Given the long-run perspective of this study, the main point of interest is the long-run coefficients, which depict the long-term structural processes, rather than the short-term adjustments to temporary shocks. The long-run coefficients are in lagged form in order to prevent simultaneity issues and capture the direction of causality more precisely. Since, as described earlier, there is no unifying framework for the analysis of the drivers of the labour share, the approach followed is more exploratory and focuses on a variety of channels. Thus, the baseline equation is the following:

$$\Delta(WS)_t = \alpha_0 + \alpha_1 WS_{t-1} + \alpha_2 GCONS_{t-1} + \alpha_3 UD_{t-1} + \alpha_4 OPEN_{t-1} + \alpha_5 MDEBT_{t-1} + \alpha_6 BDEBT_{t-1} + \sum_{n=1}^{N} \beta_n \Delta z + \varepsilon_t$$

where WS is the (adjusted) wage share (Figure 1), $GCONS$ is government consumption (share of GDP), UD is union density (share of the labour force), $OPEN$ is trade openness (share of GDP), $MDEBT$ is the mortgage debt-to-income ratio (share of GDP), $BDEBT$ is the business debt-to-income ratio (share of GDP)[3] and z is a vector that includes the short-run effects of the variables. The terms a_0 and ε_t are the constant and the error terms, respectively. $OPEN$ is the sum of exports and imports over the level of output. $\Delta(GROWTH)$ (where $GROWTH$ is $\Delta(GDP)$) is included among the short-run effects to control for the cyclicality of the labour share.

Government spending is used as a proxy for welfare spending, which decreases the cost of job loss and leads to more equal distribution through the provision of benefits. Thus, a positive impact on the labour share is anticipated ($\partial\Delta(WS)/\partial GCONS > 0$). For Sweden, as Lundberg and Åmark (2001) argue that the experience of the extensive universal Swedish welfare state model is mainly a post-1970s development (Esping-Andersen 1990) rather than a historical stylized fact. Thereby, it is likely that the effect of government spending will be insignificant or even perverse as the pre-Fordist era Swedish welfare system has been based on discrimination. Contrariwise, in France, a universal social insurance system was established since the pre-WWII era under the pressure of social groups like the feminist movement and agricultural workers (Dutton 2002). These events initiated the longstanding *Dirigiste* interventionist state tradition of France (Clift 2006).

The second power resource indicator is unionization, which is expected to increase labour's income share since collective bargaining empowers workers, especially the less privileged ($\partial\Delta(WS)/\partial UD > 0$). It is anticipated that the positive impact in the case of France will be less strong or insignificant since, historically, its unions have weaker institutional positions compared to the centralized bargaining coordination of the Scandinavia. In Sweden's historically nation coordinated bargaining system (Blake 1960), workers are organized in one confederation, the Swedish Trade Union Confederation (LO) since 1898. In contrast, the French working class is historically organized in independent sectoral unions, with collective bargaining conducted mainly in the firm or plant level, being closer to a liberal economy like the United States. This means that wage legislation and employment protection has been sector specific, which may not be necessarily reflected at the macro level. Additional power resource variables should include the unemployment rate and strike activity; however, relevant series of appropriate length are not available for either country.

Trade globalization, $OPEN$, measures enhanced transnational capital mobility, that is increased exit options for the firms, which ultimately translates to enhanced bargaining power for the most mobile factor, that is capital (Rodrik 1997). However, the pre-WWII and Fordist globalization phases were driven by trade gains rather than by the domestic distributional conflict between labour and capital as in neoliberalism (Palley 2018). Therefore, it is not unlikely that, prior to the 1980s, trade globalization might have benefited labour to some extent. $OPEN$ is selected as a widely used indicator in the

literature, especially among the studies that use historical macroeconomic data (Bengtsson 2014b; Roine *et al*. 2009). Other measures, such as the FDI, capital account openness or the export-import price ratio, might capture better this channel, but data availability is limited for both countries.[4]

As argued earlier, the impact of mortgage indebtedness on functional income distribution is to some extent ambiguous (Argitis and Dafermos 2013; Froud *et al*. 2002; Langley 2007). A negative effect would indicate that workers' rising financial vulnerability leads to loss of bargaining power, thus, to declining wage shares ($\partial\Delta(WS)/\partial MDEBT < 0$). As analysed earlier, the negative effects of mortgage debt on wage share growth are likely to be smaller and/or insignificant in Sweden due to its state-led banking system. Regarding the business debt-to-income ratio ($BDEBT$), its statistical significance depends on whether employers have the power to pass increases in overhead business debt payments to workers' wages, given the domestic balance of power between the two.

The real short-term interest rate (INT) is included as an additional control variable related to households' financial vulnerability and interest payments related to corporate debt. A rise in it increases both household and corporate debt payments, at the expense of workers' bargaining power, thus, it may lead to higher inequality through two distinct channels. Further, to test for potential endogeneity issues with government consumption, the adjusted wage share is replaced with the private wage share (WSP) as the dependent variable, following Stockhammer's (2017) formulation.[5]

The real stock prices index (PS) and the stock market capitalization-to-GDP ratio ($SCAP$) are incorporated as rough proxies to control for shareholder value orientation. It should be noted that they may not fully depict shareholder value maximization, as they also capture bubbles, hence, they are included as controls, rather than in the baseline specification. This choice has to do with historical data availability limitations in share buybacks and dividend payments series. Here, real stock prices and stock market capitalization serve a signal indicator that returns in financial markets increase, hence, the motive for non-financial firms to turn to financial activities making more of them become involved. Even studies that cover the post-1970s period use similar rough proxies for shareholder value due to poor data availability (e.g. Köhler *et al*. (2019) use the stock turnover ratio).

To evaluate the potential positive distributional effects of the state of democracy in the two economies, the Polity2 score ($POLITY2$) is included in specification (6).[6] As argued by Scheve and Stasavage (2016, 2017) in their study on democracy and wealth shares, despite, in general, democratization leads to more equal distribution, when the democratic process is captured by the economic elites redistribution policies might be limited or absent. As a means of testing additional proxies related to labour power resources, in specifications (7) and (8), I experiment with Left executive ($LEFT$) and wage bargaining centralization ($BARGAIN$) from Scheve and Stasavage (2009).[7] Like $POLITY2$, in principle, $LEFT$ is related to pro-labour redistribution policies. Nevertheless, given that policy agendas even within the same party

change significantly over time, its effects might vary historically. Finally, $BARGAIN$ is used as an alternative to UD, which should also exhibit a positive effect on labour's income share. However, given that this is a time dummy, UD is expected to capture more accurately labour's bargaining power through the actual number of union members and have more explanatory power. Data sources can be found in the Appendix (Table A1).

4. Econometric results

France (1911–2010)

The estimations for France show that the two key explanatory variables for its wage share are government consumption ($GCONS$) and mortgage indebtedness ($MDEBT$), which exhibit positive and negative long-run effects, respectively. As reported in Table 2, $GCONS$ increases the French wage share historically, with its long-run coefficients remaining relatively stable in terms of magnitude. More importantly, in six out of eight specifications estimated, the long-run coefficients of $GCONS$ are statistically significant at the 1 per cent level. Regarding the second robust long-run effect, the coefficients of $MDEBT$ are negative in all eight specifications estimated. These long-run coefficients are statistically significant at the 1 per cent level in (6), 5 per cent level in (1), (3), (4) and (7), and 10 per cent level in (2). Furthermore, the long-run impact of $POLITY2$ is positive and statistically significant at the 10 per cent level, which shows that, historically, democratization has led to more egalitarian distribution in France.

As regards the short-term effects, overall, the only variable that has significant explanatory power in terms of magnitude and statistical significance (at the 1 per cent level) is $GCONS$, whose effect is positive as in the long-run. Also, it is worth noting that $LEFT$ exhibits a positive (but statistically insignificant) short-run effect. Intuitively, this potentially implies that left-wing governments may follow their principles in the short-term, but, eventually, they become less partisan.

Overall, the econometric results for France show that rising household indebtedness induced working class discipline and higher inequality historically, confirming the argument of Froud *et al*. (2002) and Langley (2007). Further evidence can be found in the Appendix (Table A3), which reports sub-sample estimations where $MDEBT$ keeps its sign and statistical significance both in the pre-1970 and post-1970 periods.[8] Regarding government expenditure, the findings suggest the egalitarian character of the universal social security model, which has been well established since the pre-WWI period (Dutton 2002), has played a key role for distribution. The sub-sample results (see Appendix), as well as the short-run coefficients, confirm the robustness of this finding. Finally, the small magnitude and lack of statistical significance for the stock market indicators for France show that its transition from market-based to bank-based finance and vice versa did not have a major impact on capital–labour relations historically.

TABLE 2
France (1911–2010) — Econometric Results

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Long-run effects								
WS_{t-1}	–0.28***	–0.25***		–0.27***	–0.16**	–0.25***	–0.25***	–0.14*
WSP_{t-1}			–0.24***					
UD_{t-1}	–0.01	–0.07	0.03	–0.01	0.10	–0.01	–0.01	
$OPEN_{t-1}$	–0.01	–0.05	0.02	–0.01	0.05	–0.02	0.02	–0.07
$GCONS_{t-1}$	0.33***	0.34***	0.23***	0.32***	–0.07	0.34***	0.33***	0.24
$MDEBT_{t-1}$	–0.15**	–0.12*	–0.16**	–0.15**	–0.01	–0.17***	–0.16**	–0.03
$BDEBT_{t-1}$	0.02	0.02	0.02	0.02	0.00	0.02	0.01	0.01
INT_{t-1}		–0.09						
PS_{t-1}				0.00				
$SCAP_{t-1}$					0.01			
$POLITY2_{t-1}$						0.25*		
$LEFT_{t-1}$							–0.89	
$BARGAIN_{t-1}$								–2.04
Short-run effects								
$\Delta(WS(-1))$	0.17	0.13		0.16	–0.10	0.11	0.14	–0.24
$\Delta(WSP(-1))$			0.13					
$\Delta(GROWTH)$	–0.01	–0.01	–0.01	–0.01	–0.00	–0.01	–0.01	0.00
$\Delta(UD)$	0.06	0.05	0.15	0.03	0.06	0.16	0.18	
$\Delta(OPEN)$	–0.02	–0.08	–0.10	–0.024	–0.04	–0.01	–0.06	–0.09
$\Delta(GCONS)$	2.12***	2.18***	1.69***	2.19***	1.75***	2.30***	1.79***	2.07***
$\Delta(MDEBT)$	0.04	–0.02	0.15	0.02	–0.31	0.16	–0.14	0.12
$\Delta(BDEBT)$	–0.02	–0.02	–0.04	–0.02	–0.03	–0.02	–0.04	–0.01
$\Delta(INT)$		0.03						
$\Delta(PS)$				0.02				
$\Delta(SCAP)$					0.00			
$\Delta(POLITY2)$						–0.17		
$\Delta(LEFT)$							0.32	
$\Delta(BARGAIN)$								–1.01
R^2	0.49	0.49	0.44	0.49	0.66	0.53	0.54	0.29
BG	0.10	0.11	0.04	0.17	0.23	0.13	0.25	0.14
Harvey	0.10	0.08	0.07	0.50	0.04	0.18	0.32	0.00

Notes: Statistical significance at 10%, 5% and 1% level is denoted by *, ** and ***, respectively. In (3), the dependent variable is the private sector adjusted wage share, while in the rest, it is the total adjusted wage share, both in first differences. Values for specification tests are *p*-values. BG test at second lag. Constant terms are included but not reported.

Sweden (1891–2000)

The econometric results for Sweden demonstrate that its wage share has been driven by four key factors historically: unionization, mortgage indebtedness, stock market fluctuations and trade openness (Table 3). The negative long-run coefficient of $MDEBT$ is the most consistent finding across all eight specifications. The magnitude of its coefficient remains relatively stable, while it is statistically significant at the 1 per cent level in (4) and (5), 5 per cent level in (1), (2), (3), (7) and (8), and 10 per cent level in (6). The long-run effect of UD is also consistently positive — as expected — and robust. Its long-run coefficient is statistically significant in five out of seven specifications. Interestingly, the long-term impact of $BARGAIN$ is also positive, despite it is not statistically significant. Regarding the stock market indicators, the long-run effects of PS

TABLE 3
Sweden (1891–2000) — Econometric Results

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Long-run effects								
WS_{t-1}	–0.16***	–0.14*		–0.22***	–0.36***	–0.25***	–0.15**	–0.16**
WSP_{t-1}			–0.18**					
UD_{t-1}	0.04***	0.04**	0.04***	0.05***	0.01	0.03	0.04**	
$OPEN_{t-1}$	0.33*	0.33*	0.38*	1.03***	1.58***	0.18	0.36*	0.38*
$GCONS_{t-1}$	–0.07	–0.08	–0.08	–0.15**	–0.22**	–0.02	–0.09	–0.01
$MDEBT_{t-1}$	–0.06**	–0.05**	–0.06**	–0.08***	–0.08***	–0.04*	–0.06**	–0.06**
$BDEBT_{t-1}$	–0.01	–0.01	–0.02	–0.01	0.01	–0.01	–0.01	–0.03*
INT_{t-1}		0.00						
PS_{t-1}				–0.96**				
$SCAP_{t-1}$					–0.09***			
$POLITY2_{t-1}$						0.02		
$LEFT_{t-1}$							–0.24	
$BARGAIN_{t-1}$								0.48
Short-run effects								
$\Delta(WS(-1))$	0.01	–0.03		–0.01	0.038	0.04	0.00	0.05
$\Delta(WSP(-1))$			0.04					
$\Delta(GROWTH)$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
$\Delta(UD)$	–0.16	–0.14	–0.14	–0.18*	–0.29**	–0.23**	–0.15	
$\Delta(OPEN)$	–0.96**	–0.87**	–1.03**	–0.51	–0.33	–0.96**	–0.88**	–0.90**
$\Delta(GCONS)$	0.22*	0.18	0.21*	0.15	0.032	0.25***	0.24*	0.27**
$\Delta(MDEBT)$	0.21***	0.19**	0.23***	0.25**	0.25***	0.20	0.22**	0.26***
$\Delta(BDEBT)$	0.06	0.04	0.05	0.05	–0.03	0.04	0.07	0.04
$\Delta(INT)$		0.08*						
$\Delta(PS)$				–1.48***				
$\Delta(SCAP)$					–0.08			
$\Delta(POLITY2)$						–1.19***		
$\Delta(LEFT)$							0.87	
$\Delta(BARGAIN)$								0.55
R^2	0.47	0.51	0.47	0.56	0.61	0.52	0.50	0.44
BG	0.67	0.95	0.76	0.80	0.01	0.55	0.42	0.57
Harvey	0.28	0.02	0.04	0.34	0.38	0.57	0.14	0.04

Notes: Statistical significance at 10%, 5% and 1% level is denoted by *, ** and ***, respectively. In (3), the dependent variable is the private sector adjusted wage share, while in the rest, it is the total adjusted wage share, both in first differences. Values for specification tests are *p*-values. BG test at second lag. Constant terms are included but not reported.

and *SCAP* are indeed negative and statistically significant at the 5 and 1 per cent levels, respectively. Finally, despite significant variation in magnitudes, the long-run effects of *OPEN* in Sweden are positive and statistically significant in most specifications.

Regarding the short-run, two interesting results emerge: *OPEN* exhibits negative and statistically significant effects, while the impact of *MDEBT* is positive. The former potentially reflects short-run wage squeeze effects under the pressure of international price competitiveness. The latter might be linked to the positive short-term effects of obtaining an asset like a house, which, however, eventually becomes negative as households accumulate more debt to service their loans. Nonetheless, given that the short-term coefficients capture adjustments to temporary shocks, their analytical value is relatively limited and sub-sample estimations can provide more meaningful insights (Table A3).

TABLE 4
Standardized Long-Run Coefficients

	France	*Sweden*
UD(-1)	–0.026	0.630***
OPEN(-1)	–0.029	0.411*
GCONS(-1)	1.404***	–0.388
MDEBT(-1)	–0.957**	–0.352**
BDEBT(-1)	0.236	–0.099

Notes: Calculations are based on the baseline specification (1). To standardize the coefficients, the estimated coefficient obtained is multiplied by the ratio of the standard deviation of the explanatory variable over the standard deviation of the dependent variable.

Recapitulating, the robust negative long-run impact of mortgage indebtedness on the Swedish wage share confirms that household indebtedness induces the self-discipline of the working class, similar to France. Additionally, the robust positive effects of unionization demonstrate that the historically well-established collective bargaining institutions of Sweden have been key for wage setting at least since the late nineteenth century. The robustness of both findings is also confirmed by the sub-sample robustness estimations (see Appendix). Further, unlike France, the negative long-run effects of stock market booms suggest that the pre-1930s and post-1980s financial deregulation eras contributed to the respective labour share declines. The positive long-run effect of *OPEN* provides some support to the Stolper–Samuelson theorem that globalization can benefit the most abundant factor. In the context of Sweden's transition from an agrarian to a small open economy throughout the twentieth century, this factor is labour. Indeed, as reported in the Appendix, the effect of *OPEN* is positive before 1970 and thereafter negative, which implies that as labour became less abundant, production potentially shifted to more capital-intensive methods.

5. The comparative political economy of the labour share in historical perspective

The main results demonstrate that finance has been decreasing the labour shares of both countries in historical perspective. Nevertheless, these baseline findings do not clarify whether the state-led, pro-labour Swedish finance system affected less negatively the bargaining power of labour in historical context. Answering this question requires to calculate the standardized coefficients of the baseline specification (i) to make the results comparable and explore their economic and political significance (Ziliak and McCloskey 2004).[9] Table 4 summarizes the standardized long-run coefficients.

Regarding the disciplinary effects of housing finance, this study demonstrates that mortgage debt accumulation has been increasing income inequality in historical context. Yet, standardizing the effects shows that the magnitude is substantially smaller in Sweden. This result provides support

to the argument that Sweden has been historically a statist-developmentalist economy, with the state regulating housing finance in favour of indebted homeowners (Johansson 1938; Schwartz and Seabrooke 2008; Wood 2017).

A state-led finance system, as in Sweden (Blackwell and Kohl 2018), allows a more egalitarian financial development – with modest shifts in income inequality – since either public banks issue private debt or the state limits the power of commercial banks through pro-labour legislation. Thus, politics clearly matter for the distributional effects of finance. Implicitly, most studies on the rise of finance generalize the Anglo-Saxon experience as the norm. Like Blackwell and Kohl (2018, 2019), this paper highlights that financial development is a complex institutional process, which varies substantially across countries and can lead to different macroeconomic outcomes; therefore, the Anglo-Saxon-biased understanding of finance can be misleading.

Regarding the non-financial explanatory variables, for France, the magnitude of $GCONS$ is larger than that of $MDEBT$, hence, the impact of public spending prevails. This is consistent with Dutton's (2002) claim that militant social movements in France achieved the establishment of universal welfare coverage from the pre-WWII period, which has a direct impact on the cost of job loss. From a political perspective, this result indicates that social conflict can shape institutions but also certain interesting policy attitudes: While the French governments have created and preserved liberal financial and wage bargaining systems, their attitude regarding expansionary fiscal policy has been substantially more open-minded, even under right-wing parties.

By the same token, the insignificant distributional effect of $GCONS$ in Sweden in the full period is consistent with Lundberg and Åmark (2001), showing that the absence of organized social movements in the early agrarian period of Sweden did not induce the establishment of an extensive welfare state before the 1970s. As in the case of housing finance, this result suggests that certain contemporary stylized facts, such as the Nordic welfare model, are not historical stylized facts. Nonetheless, this finding should be interpreted with some caution, as $GCONS$ is a rough proxy for welfare given historical data availability.

Regarding union density, its positive effect on the wage share of Sweden is larger than the negative effect of mortgage indebtedness. Bengtsson (2014b) also finds similar union density effects over the same period. Therefore, Sweden's centrally coordinated bargaining system since the late nineteenth century (Blake 1960) has indeed promoted egalitarianism.

The substantial positive effect of trade on the Swedish wage share is another interesting finding. Not surprisingly, globalization matters in a small open economy. As shown in the Appendix (Table A3), the effect of $OPEN$ becomes negative only during neoliberalism, supporting Palley's (2018) argument that the pre-neoliberal, *Embedded Liberalism* trade globalization periods were not motivated by class conflict but by trade gains, benefiting the abundant factor of production, that is labour, as in the Stolper–Samuelson theorem. The

opposite is true for France: trade decreases the labour share prior to 1970 and increases it thereafter. Like financial expansions, not all trade globalization periods have been similar across space and time.

Summarizing, the results of this paper have some interesting implications for the comparative capitalisms literature. Focusing on two 'non-typical' cases, such as France and Sweden, shows that mixed varieties of capitalism exist, thus, challenges the relevance of the standard liberal-coordinated market economy dichotomy (Hall and Soskice 2001). Moreover, the fact that finance is a key determinant of functional inequality historically suggests that comparative political economy should take into account the complementarity between financial systems and wage bargaining coordination, fiscal policy and the distribution of trade gains to adequately explain macroeconomic performance (Johnston *et al*. 2020). Finally, even the more sophisticated debt-driven/export-driven comparative capitalism classification (Stockhammer 2016) overlooks intra-variety diversification. Domestic financial institutions and the distribution of trade gains vary across countries, as in France and Sweden. Therefore, comparable debt levels and similar degrees of trade openness can generate different macroeconomic outcomes.

6. Conclusions

Considering finance as historically integral to capitalism, this article focused on the macro level and estimated the determinants of the labour shares of France (1911–2010) and Sweden (1891–2000) in the historical context, with a focus on finance. As demonstrated, housing and corporate finance have been vital parts of both economies since the late nineteenth century. The econometric findings provide robust evidence that mortgage debt accumulation has been reducing the labour shares of France and Sweden during that period. Interestingly, the negative impact is stronger in France due to its private-based housing finance system and decentralized wage bargaining system. Proxies related to power resources theory, as discussed in Section 2, like government spending and unionization, are found to be more influential than the financial indicators in both cases, that is they are more strictly related to the capital–labour conflict in a historical context (Table 4). Thus, Stockhammer's (2017) argument that financial and trade liberalization are more influential for functional inequality in the post-1970 era is a period specific rather than a historical stylized fact.

The key implications of this study are the following. First, finance has been historically a key determinant of the capital–labour conflict, decreasing the labour shares of both countries. Second, a state-led financial system along with centralized collective bargaining institutions can indeed limit indebted workers' loss of bargaining power. Hence, the financial development model of Sweden since the early twentieth century offers important policymaking insights for small open developing economies. Third, despite financial

variables play an important complementary role, historically, the effects of industrial relations and welfare expenditures are dominant.

Future research on inequality should focus on the institutional complementarities between employment relations and domestic financial systems to adequately explain the capital–labour conflict. Further, the development of historical macroeconomic databases that include more sophisticated financial indicators is needed for a more detailed exploration of shareholder maximization and financial institutions liberalization. Such work, along with further micro-level and case study research, will allow future studies to build a more inclusive theoretical framework for the analysis of income distribution.

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Notes

1. *Dirigisme* (i.e. 'directionalism') refers to occasions where the state plays a central role in setting the direction of the economy through industrial policy and the regulation of public–private industrial relations.
2. The differences in the samples for the two countries have to do with historical data limitations. This choice aims to minimize potential biases that could have been introduced if one decided to combine series from different sources, which may have inconsistencies in the definitions and calculation methods.
3. *BDEBT* is the total credit to the non-financial sector minus mortgage debt. It must be noted that the private debt series used (Jordà *et al*. 2017) include only bank lending. This is to some extent problematic for the neoliberal period where non-bank lending grew substantially in both economies, and for the pre-WWI era in France, where non-bank mortgage credit was provided by notaries. However, this is the only available historical dataset of such financial series.
4. This is the case even for studies that cover substantially shorter periods, that is start at the early 1970s. Including only the import share is another option. Testing yielded similar results with $OPEN$, thus, only the latter is reported to allow comparability with existing studies.
5. As the government sector is, by definition, non-profitable, its wage share (WSG) is 100%, thus, the private wage share (WSP) is: $WS = (1 - GCONS) * WSP + GCONS * WSG \Rightarrow WSP = (WS - GCONS)/(1 - GCONS)$.
6. *POLITY2* varies from –10 to +10, that is from hereditary autocracy to consolidated democracy.

7. *LEFT* is a dummy variable for left- and right-wing administrations (1=left-wing prime minister and/or president; 0=right-wing). *BARGAIN* is a dummy for the centralization of wage bargaining (scale 1–3). Coding for dummies comes from Scheve and Stasavage (2009), which is extended backwards for Sweden (1891–1920: right-wing) and forward for France (1997–2002: left-wing; 2002–2011: right-wing) to cover the full historical period the paper examines.
8. Estimations based on shorter sub-samples could provide a more thorough cross-period analysis. However, this is problematic since the series include annual observations and many 'regimes' were particularly short-lived, which would yield biased estimates.
9. Coefficient variance decomposition analysis also suggests no multicollinearity issues.

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Appendix

TABLE A1
Data Sources

Country	*Variable*	*Period*	*Source*
France	Wage Share (adjusted)	1896–2010	Piketty and Zucman (2014)
	GDP (real)	1896–2010	
	Government Consumption	1896–2010	
	Exports and Imports (real)	1896–2010	
	GDP (nominal)	1870–2013	Jordà *et al*. (2017)
	Total Private Debt (nominal)	1870–2013	
	Mortgage Debt (nominal)	1870–2013	
	Interest rate (nominal)	1870–2013	
	Inflation rate	1870–2013	
	Stock Prices (real)	1854–2007	Le Bris and Hautcoeur (2010)
	Stock Market Capitalization	1930–2005	Roine *et al*. (2009)
	Union Density	1910–2014	Donado and Wälde (2012), OECD
	Polity2 Score	1875–2016	Center for Systemic Peace
	Left Executive	1900–2010	Scheve and Stasavage (2009); Own Calculations
	Wage Bargaining Centralization	1900–2010	
Sweden	Wage Share (adjusted)	1875–2000	Edvinsson (2005)
	GDP (real)	1875–2000	Schön and Krantz (2015)
	Exports and Imports (real)	1875–2000	
	GDP (nominal)	1875–2000	Jordà *et al*. (2017)
	Government Consumption	1870–2013	
	Total Private Debt (nominal)	1870–2013	
	Mortgage Debt (nominal)	1870–2013	
	Stock Prices (real)	1870–2013	Waldenström (2014)
	Interest rate (nominal)	1870–2013	
	Inflation rate	1290–2008	Edvinsson and Söderberg (2011)
	Stock Market Capitalization	1930–2005	Roine *et al*. (2009)
	Union Density	1890–2014	Donado and Wälde (2012), OECD
	Polity2 Score	1900–2016	Center for Systemic Peace
	Left Executive	1891–2000	Scheve and Stasavage (2009); Own Calculations
	Wage Bargaining Centralization	1891–2000	

Note: In several series for France, the World War periods (∼1914–1918 and ∼1939–1945) are missing. The WWII years are missing in certain series for Sweden. Following Pepinsky (2018), the standard listwise deletion method is applied, instead of multiple imputation, which yields more biased and less efficient estimates when values are missing not at random (MNAR). The only exception where observations were missing at random (MAR) is union density for France, hence, log-linear interpolation was applied. The *SCAP* series start at 1929, thus, the sample for specification (5) is 1929–2000 for Sweden and 1929–2011 for France.

TABLE A2
Augmented Dickey–Fuller Stationarity Tests

	France			*Sweden*		
	Levels	*FirstDiff.*	*Obs*	*Levels*	*First Diff.*	*Obs*
WS	0.40	0.00	115	0.72	0.00	126
WSP	0.07	0.00	106	0.34	0.00	126
GCONS	0.98	0.00	106	0.89	0.00	131
UD	0.19	0.01	105	0.31	0.00	125
OPEN	0.87	0.00	106	0.99	0.00	126
MDEBT	0.99	0.00	96	0.84	0.00	139
BDEBT	0.55	0.00	90	0.3	0.00	139
INT	0.02	0.00	103	0.15	0.00	136
PS	0.86	0.01	114	0.51	0.09	110
SCAP	0.62	0.00	78	0.89	0.00	67
POLITY2	0.00	0.00	117	0.46	0.00	142
LEFT	0.00	0.00	111	0.05	0.00	110
BARGAIN	0.85	0.00	111	0.89	0.00	110

Note: p-values are reported.

TABLE A3
Sub-Sample Estimations

	France		*Sweden*	
	1911–1970	1970–2011	1891–1970	1970–2000
		Long-run effects		
WS_{t-1}	–0.927***	–0.788***	–0.428***	–0.404**
UD_{t-1}	–0.103	1.051***	0.022	0.065
$OPEN_{t-1}$	–0.213*	0.168**	0.539	–0.053
$GCONS_{t-1}$	1.006***	1.358***	0.056	–0.416
$MDEBT_{t-1}$	–0.542**	–0.089*	–0.035	–0.170**
$BDEBT_{t-1}$	0.060	–0.092***	–0.029	0.094
PS_{t-1}	–0.190	0.002	–2.273*	0.173
R^2	0.76	0.83	0.68	0.80
BG	0.29	0.17	0.23	0.08
Harvey	0.78	0.50	0.23	0.05

Notes: Statistical significance at 10%, 5% and 1% level is denoted by *, ** and ***, respectively. Constant terms and short-run (first-differenced) coefficients are included in the estimations, but not reported.
JEL codes: E44, G5, G30, J50